

New Solar Homes Partnership

NSHP Training Workshop

March 13, 2014

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Agenda

1. Welcome
2. Program Information & Eligibility
3. NSHP Documentation
4. Energy Efficiency
5. PV Calculator
6. Online Application Tool
7. Application Clinic

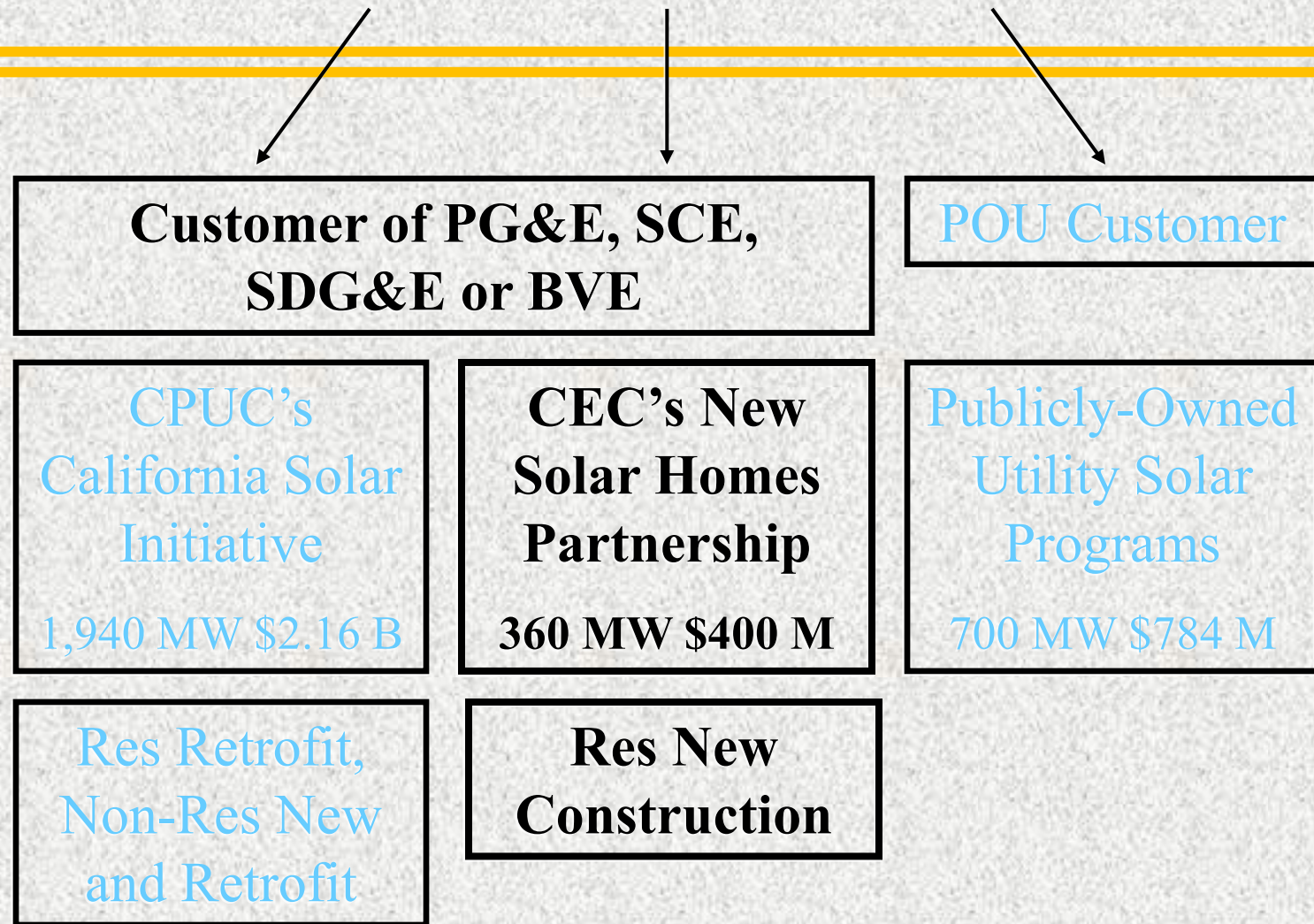
Purpose

- Provide assistance to all parties participating in the NSHP program
 - Application Process
 - Required Documents
- Any comments or suggestions on improving the NSHP program can be sent to the California Energy Commission's Renewable Energy Office at renewable@energy.ca.gov

NSHP Funding

- Waiting List Established November 16, 2011.
- <http://www.gosolarcalifornia.ca.gov/nshp/waiting/>
- Last Updated 11/27/13
 - Available Funding: ~\$68.3 Million
 - Requested Funding: ~\$12.9 Million
- Potential Additional Funding Sources: Modified Reservations, Expired Projects, loan repayments

California Solar Initiative



New Solar Homes Partnership Program Goals

- Establish a self-sufficient solar industry where solar energy systems are a mainstream viable option for homes by 2016.
- Achieve 360 megawatts of installed solar electric capacity in California by the end of 2016.
- Place solar energy systems on 50% of new homes by end of program.

New Solar Homes Partnership Guidebook Changes

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Program Changes - Market Rate Housing

Old (6 th Edition)	New (7 th Edition)
Solar as an Option	Replaced with Large Developments
Solar as Standard	Replaced with Large Developments
Build-Out Schedule	Replaced with Reservation Decrease Schedule
Progress Report	Replaced with Reservation Decrease Schedule

Program Changes - Energy Efficiency

Old (6 th Edition)	New (7 th Edition)
2005 and 2008 Building Energy Efficiency Standards	2013 Building Energy Efficiency Standards
Tier I and Tier II	Code-Compliant, Tier I and Tier II
Plan Check waived for projects participating in their utility's energy efficiency new construction program.	Plan Check also waived for: <ul style="list-style-type: none">•Code-Compliant projects•Tier I and Tier II projects that comply with 2013 Standards and provide 2013 compliance documentation signed by a CEA certified for the 2013 Standards.

General Program Changes

	Old (6 th Edition)	New (7 th Edition)
Solar Permit Date	May be issued up to 180 days after issue date of certificate of occupancy	Reduces the amount of time to 60 days
Equipment installation before reservation	No more than 24 months before	No more than 6 months before
Lease/PPAs	If it stated a rebate amount less than requested, only that amount could be paid unless an amendment was submitted	Allows NSHP incentive when claiming payment to exceed the NSHP amount identified in the lease/PPA by up to 10% without an amendment
Incentive Rates	Tier I, Tier II, and Affordable housing	Added Code-Compliant.
Incentive decline process	Decline will occur when cumulative MW capacity reaching “plan check ready” equals the MW reserved for that level’s target	Decline will occur when the cumulative MW capacity of reservations submitted equals MW target for that level
Energy Commission’s Database of Solar Contractors, Installers and Sellers	All companies that sell and/or install solar system equipment must be registered	Removed

General Program Changes

Old (6 th Edition)	New (7 th Edition)
Final Subdivision Map Required	Tentative subdivision map acceptable
All projects must submit an equipment purchase agreement	Self-installs must provide an equipment purchase agreement
Reservation period for virtual net metered projects depended on the housing type	Reservation period for all virtual net metered projects is 36 months
Revised incentive amount calculated at the time the revised calculator was submitted to PA	Calculate revised incentive amount upon submittal of the complete NSHP-2 and complete documentation supporting the changes to project
For projects with multiple sites/systems, funding is tied to each site	Funding is tied to the project, not to the sites.

General Program Changes

Old (6 th Edition)	New (7 th Edition)
No correction period allow for reservations	Complete reservation applications and payment claim packages found to contain minor errors or discrepancies will be provided with 10 business days to provide clarifications
Complete payment claim package must be submitted on or prior to reservation expiration date.	Complete NSHP-2 must be submitted on or prior to reservation expiration date.
No partial payment option	Partial Payment Allowed
Can not add additional sites to an existing reservation	Applicants may add solar system sites to a project with a valid, unexpired reservation with remaining funds.
Signature required on CF-1R-PV/NSHP PV-1	Removes signature requirement

Program Changes – New Form Names

Form Name	Old (6 th Edition)	New (7 th Edition)
NSHP Certificate of Field Verification/Additional Energy Features Checklist	CF-4R-EE	NSHP EE-3
Certificate of Installation	CF-6R	CF-2R
Certificate of Field Verification and Diagnostic Testing	CF-4R	CF-3R
CECPV Calculator Compliance Form	CF-1R-PV	NSHP PV-1
Installation Certificate Form/PV Installation Form	CF-6R-PV	NSHP PV-2
PV Field Verification and Diagnostic Testing Form	CF-4R-PV	NSHP PV-3

Does the new Guidebook (Seventh Edition) Apply to Your Project?

- What if:
 - A reservation application has been submitted, but has not received Energy Commission approval
 - Written Notice
 - A payment claim has been submitted, but has not received Energy Commission approval
 - Project Bank Account
 - 90 Calendar Days
 - 10 Business Days
 - Code-Compliant
 - Calculating incentive increases
 - Partial Payment Option
 - Retailer/Installer Registration

Getting Ready to Participate in the New Solar Homes Partnership Program

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Before Applying to NSHP

- **Please Read the NSHP Guidebook and NSHP Web Tool Handout**
- Consider what stage of construction your project is in:
 - Can your project be designed to meet the minimum energy efficiency requirements?
 - Is your project eligible for incentives from your utility's energy efficiency new construction program?
 - Can everything in your project be verified by a HERS rater?

Eligibility Requirements

- Project located in one of four investor-owned electric service territories (PG&E, SCE, SDG&E, BVES).
- Solar energy system will be at least 1 kW AC or larger and interconnected with the utility grid.
- The electricity from the system will offset the end-use customer's electric load.
- The system will be composed of new certified components from the Energy Commission's Lists of Eligible Equipment and will be covered by a 10-year warranty.

Eligibility Requirements Continued

- New residential construction
 - A residential building is considered “new” if the entire building structure is subject to current Title 24 Standards.
 - Solar permit should be pulled prior to the issuance of the certificate of occupancy, but no later than **60** days after.
- Solar energy systems and energy efficiency measures are third-party verified.

Energy Efficiency Requirements

- **2013** Building Energy Efficiency Standards
 - **Code-Compliant:** Meets the 2013 Standards before PV Credit
- **2008 and 2013** Building Energy Efficiency Standards
 - **Tier 1:** minimum 15 percent beyond the Standards for combined space heating, cooling and water heating
 - **Tier 2:** minimum 30 percent beyond the Standards for combined space heating, cooling and water heating and 30 percent for space cooling
- **2013** Non-Residential:
 - **Tier 1**=10% greater than standard overall
 - **Tier 2**=15% greater than standard overall and >15% space cooling

Retailers and Installers

- Contractors installing solar systems must have a California State A, B, C-10 or C-46 license. Solar systems may also be self-installed.
- Retailers and installers **may** self-register with the Energy Commission via the Go Solar California website,
<http://www.gosolarcalifornia.ca.gov/database/addcompany.php>

Incentive Structure

- One-time, upfront incentive
- Incentives decline as megawatt targets are achieved
- Incentives decline to zero at the end of the program
- <https://www.newsolarhomes.org/RebateLevels.aspx>
- Incentive amount calculated using the CECPV Calculator
- Expected Performance Based Incentive (EPBI)
- Incentives limited to the first 7.5 kW AC for a residential unit AND
- Incentive Amount Cap
 - Affordable Housing Residential Unit Project: Limited to 75% of the Total System Cost
 - Market-Rate Housing Project: Limited to 50% of the Total System Cost

Market-Rate Housing

Code-Compliant Incentive (per watt, reference system)	Tier I Incentive (per watt, reference system)	Tier II Incentive (per watt, reference system)	Reserved Volume (MW-AC)
\$2.25	\$2.50	\$2.60	55.3
\$2.00	\$2.25	\$2.35	N/A
\$1.75	\$2.00	\$2.25	5
\$1.50	\$1.75	\$2.00	10
\$1.25	\$1.50	\$1.75	15
\$1.00	\$1.25	\$1.50/\$1.75	35
\$0.75	\$1.00	\$1.25	50
\$0.50	\$0.75	\$1.00	60
\$0.35	\$0.50	\$0.75	65
\$0.25	\$0.25	\$0.50	72

Affordable Housing

Code-Compliant Incentive (per watt, reference system)	Residential Dwelling Unit Incentive (per watt, reference system)	Common Area Incentive (per watt, reference system)	Reserved Volume (MW-AC)
\$3.25	\$3.50	\$3.30	3.3
\$2.90	\$3.15	\$2.97	N/A
\$2.55	\$2.90		0.25
\$2.20	\$2.55		0.5
\$1.85	\$2.20		0.75
\$1.50	\$1.85		3.5
\$1.15	\$1.50		5.0
\$0.80	\$1.15		6.0
\$0.55	\$0.80		6.5
\$0.35	\$0.45		7.2

Incentive Rates for Incentive Level 6*

Code-Compliant Incentive

\$1.00/Watt

Tier I Incentive

\$1.25/Watt

Tier II Incentive

2008 Standards
= \$1.50/Watt

2013 Standards =
\$1.75/Watt

Affordable Housing Incentive*

\$1.50/Watt :
Residential
Units Only

AFFORDABLE HOUSING: COMMON AREAS, TAX EXEMPT VS. NON-TAX EXEMPT

Project Types

Custom Homes

Large Developments

Projects/Phases of 6 or
more homes
AND

Solar on at least 50% of
those homes

Small Developments

Projects/Phases of less
than 6 homes
AND/OR

Solar on less than
50% of homes.

RESERVATION PERIODS?

Project Types Continued

Common Areas

Areas in the development that are reserved for the use of the residents.

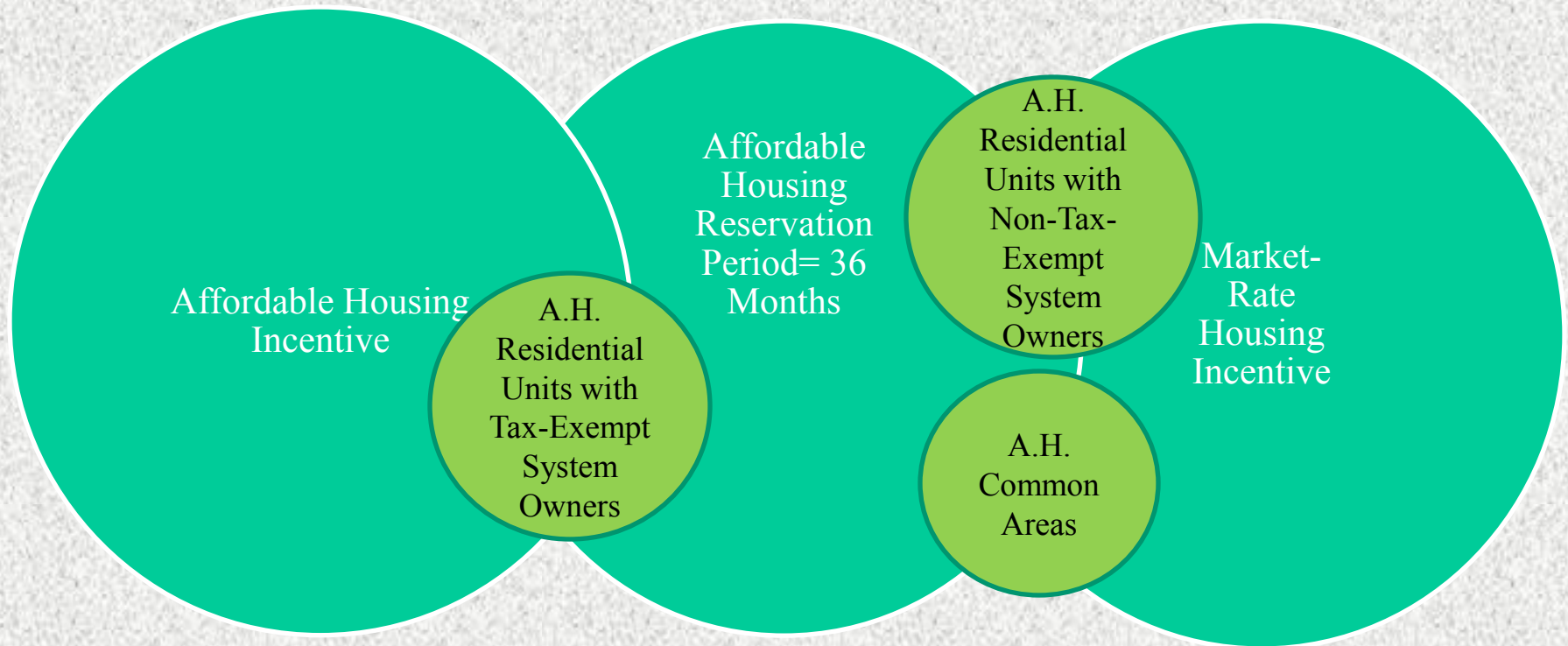
Example: Recreation Center, Pool House, etc.

Affordable Housing

At least 20% of the project units must be reserved for extremely low, very low, lower, or moderate income households for a period of at least 10 years.

RESERVATION PERIODS?

Affordable Housing Reservation Period vs. Incentive Level



The Basic Process



Reservation

- Applicant submits reservation application package.
- Program administrator reviews and approves. Incentive is reserved for applicant.



Installation and Verification

- Applicant installs PV system and energy efficiency measures.
- HERS rater verifies and tests measures installed.
- Building department finalizes solar permit.
- Applicant applies for interconnection.



Payment Claim

- Applicant submits payment claim package to incentive program(s).
- Program administrator reviews and approves. Incentive is paid.

The Detailed Process



Complete NSHP Reservation Applications and Payment Claims...

- Meet all NSHP program requirements and administrative expectations.
 - Have consistent names, site addresses, and equipment on all supporting documentation.
 - Have all of the required signatures on the documents.
- Use the newest versions of documents and calculation tools supplied and/or authorized by the California Energy Commission.
- Include all required supporting documentation with the reservation application or payment claim package.

New Solar Homes Partnership: The Reservation Application

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Reservation Application Document Overview

General Information

NSHP-1

Proof of New Residential Construction

Building Permit

Tentative or Final Subdivision Map

Commitment to Solar

NSHP PV-1

Labor Contract

Energy Efficiency

Title 24 Documentation

Construction Plan-Set

Additional Information for Certain Project Types

- Regulatory Agreement (Affordable Housing)
- System Size Justification

Reservation Application Form (NSHP-1)

- Provides general information on the project (applicant information, location, housing type, utility, HERS rater information)
- Designation of an authorized representative
 - Signs the NSHP Payment Claim Form (NSHP-2)

Provided by Applicant

100% COMPLETION?

New Residential Construction Building Permit OR Subdivision Map

- Document from the city or county stating that a new home is being constructed on the site where the solar energy system is being installed.
- A document that illustrates where all of the homes participating in the NSHP are located. The document should be recorded with the city or county.

Provided by Applicant

Is this always required?

Certificate of Compliance Form (NSHP PV-1)

- It documents the system specifications and provides an estimated incentive amount.
- Each NSHP PV-1 comes with two digital files, .her and .emf. The .her file must be submitted in addition to the NSHP PV-1.
- **No signature required.**

Provided by Solar Retailer/Installer

Installation Contract

- The installation contract specifies the work the solar installer will be performing on the project.
- Indicates the specific system components to be installed on the project.
- Identifies estimated NSHP incentive amount.
- Self-installs?

Provided by Solar Retailer/Installer

Energy Efficiency Documentation – Title 24 Report (CF-1R/PERF-1)

- A document that shows the energy efficiency measures being installed on the project. CF-1R is for residential projects. PERF-1 is for non-residential projects. Input file must also be submitted.

Provided by: This depends on the project's energy efficiency level and the applicable Building Standards.

Reminder: A Certified Energy Plans Examiner/ Certified Energy Analyst must be certified for the appropriate residential type and Building Standards that the home is constructed under.

Under what circumstances is a plan check not required?

Energy Efficiency Documentation – Construction Plan-Set

- A compilation of the plans that shows what will be installed on the home.
- Specifically, the NSHP is looking for the set that includes:
 - Architectural, Electrical, Mechanical, and Plumbing
 - A window and door schedule that shows sizes and includes ALL skylights (if not shown on the floor plan)
 - Elevation, wall, roof, floor construction assemblies
 - Floor finish schedule (if CF-1R shows High Mass Design)
 - A site plan with a North arrow

Provided by Applicant

Is this always required?

Regulatory Agreement

- A document generally between a developer and either the city/county, TCAC or other funding sources that requires the developer to restrict a certain number of units in the project for affordable housing.

Provided by Applicant

Reminder: Affordable Housing Projects Only

System Size Justification

- Documentation showing that the solar energy system is sized such that its expected performance is no greater than 100 percent of the building's on-site estimated annual electricity consumption. Acceptable documents are the estimated annual electricity consumption of the residential unit based on a detailed energy use calculation, or a letter detailing expected energy consumption.

Provided by: Certified Energy Plans Examiner (CEPE), Certified Energy Analyst (CEA), architect, engineer, C-10 licensed electrical contractor.

When to Provide: For Common Area systems greater than 7.5kW and if requested by Program Administrator

Submitting the Reservation Application

Step 1: READ THE NSHP GUIDEBOOK!

Make sure that your project is eligible.

Make sure you're familiar with the program requirements.

Step 2: Gather the required project documentation.

Use the reservation checklist.

Verify that all documents are complete with consistent information.

Step 3: Submit the reservation application.

Submittal via the NSHP Web Tool is encouraged.

Keep it simple.

Step 4: Program Administrator Review

Tracking the Status of the Reservation Application

Plan Check (if applicable)

Qualifying for a Correction Period

Step 5: CEC Review & Approval

Other Reservation Application Related Details...

If you have a project with more than one home, then...

The reserved funding is tied to the project, not to the sites.

Think of it like a bank account:

If a site requests less money...

If a site requests more money...

What if you run out of money...

You can add more sites to an existing project, if...

You have funding remaining for your project

AND those additional sites are from the same subdivision as the original project

AND your project has not expired

AND you have not been paid an incentive for all sites within that original project.

More Reservation Application Related Details...

Reservation Funding Decrease Schedule

Interval	Funding Decrease
12 months	Requested incentive <15% original amount, funding may be reduced up to 85% of original amount
18 months	Requested incentive <35% original amount, funding may be reduced up to 65% of original amount
24 months	Requested incentive <55% original amount, funding may be reduced up to 45% of original amount
30 months	Requested incentive <75% original amount, funding may be reduced up to 25% of original amount

- Large Developments
- Evaluation Criteria
 - Sum of incentive amounts for Submitted Sites vs. Reservation Amount

New Solar Homes Partnership: The Payment Claim

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Payment Claim Document Overview

General Info

NSHP-2

STD-204

Warranty Coverage

NSHP-3

HERS Verification

NSHP PV-3

NSHP EE-3

CF-3R

Interconnection

(Verified by
Program
Administrator)

Additional Information for Certain Projects

- Lease Agreements or Power Purchase Agreements
- Building Permit Sign-Off

Payment Claim Form (NSHP-2)

- A document that confirms the incentive amount for the site.
- Requests data on various components of the NSHP process.
- Allows the payment to be reassigned.
- Original, wet signatures required on form.

Provided by Applicant

Payee Data Record (STD-204)

- A standardized State document that must be completed by any entity that will be receiving funds from the State.
- If requested by the Program Administrator, applicant may also need to submit a W-9 Form.

Provided by Applicant or Payee

Ten Year Warranty Form (NSHP-3)

- This document indicates what is being covered by the ten-year warranty.
- Manufacturer's warranties for modules and inverters also required if only system installation is covered by 10-year warranty.

Provided by Solar Retailer/Installer

Lease Agreement/PPA

- Agreements for systems that are not purchased.
- An agreement made with end-use customer (i.e. builder or homebuyer).
- Requirements:
 - Term \geq 10 Years
 - Identify NSHP incentive amount and benefit.
 - Options at end of lease term
 - Repayment

Provided by Solar Retailer/Installer

ANNUAL STATUS REPORT

HERS Verification Forms (CF-3R, NSHP EE-3, NSHP PV-3)

- Forms verifying that the newly constructed home contains all of the energy efficiency features listed during the plan-check.
- Forms verifying that the solar energy system was installed according to the design and shading criteria entered into the PV Calculator.
- Acceptance Tests verify measures from a PERF-1 and require applicants to directly submit to NSHP.

Verified in the HERS Registry by the Program Administrator in most cases.

Interconnection Letter

- A letter from the utility providing authorization for the solar energy system to be interconnected to the utility grid.
- VNEM allocations should match the NSHP-1.

**Verified in the utility interconnection database
by the Program Administrator***

Final Building Permit Signoff

- Documentation provided by the building department that verifies the **building** meets the required California Building Code
 - Inspection Record with signatures, Certificate of Occupancy

Provided by Applicant

Final System Cost Documentation

- Documentation that clearly identifies the final amount paid or legally incurred by the **system owner** for the purchase and installation of the solar energy system.
 - **NO** financing fees, origination fees, processing fees, administrative fees, etc.

Provided by Solar Retailer/Installer

Submitting the Payment Claim

Step 1: READ THE NSHP GUIDEBOOK!

Make sure you're familiar with the program requirements.

Plan ahead to make sure you can meet the program deadlines.

Step 2: Gather the required project documentation.

Use the payment claim checklist.

Verify that all documents are complete with consistent information.

Step 3: Submit the payment claim.

Submittal via the NSHP Web Tool is encouraged.

The NSHP-2 with original signatures must be mailed in.

Step 4: Program Administrator Review

Tracking the Status of the Payment Claim

Qualifying for a Correction Period

Step 5: CEC Review & Approval

Other Payment Claim Related Details...

There are NO time extensions or exceptions!

If you turn in your NSHP-2 on or before the reservation expiration date...

You can request a partial payment, if...

Your project is participating in your utility's new construction program.

AND on or before the reservation expiration date, you have submitted all documents in the payment claim package, with the exception of the CF-3R and NSHP EE-3.

You have 90 calendar days to submit the remaining documents for the payment claim package.

You will have up to 90 calendar days after the reservation expiration date to submit the CF-3R and NSHP EE-3, and request the balance of your incentive.

NSHP Resources

Go Solar California Website

- <http://www.gosolarcalifornia.ca.gov/index.php>

NSHP Online Application Tool

- <https://www.newsolarhomes.org>

NSHP Forms and Documents

- <http://www.gosolarcalifornia.ca.gov/documents/nshp.php>
- <http://www.energy.ca.gov/title24/>

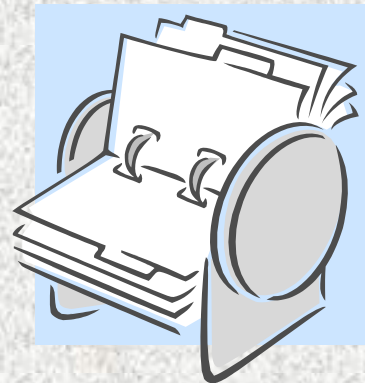
NSHP Training Seminars

<http://www.gosolarcalifornia.ca.gov/nshp/training/>

Upcoming Training Seminars

Contact Information

- NSHP Program Administrators
 - <http://www.gosolarcalifornia.ca.gov/contacts/consumers.php>
- Renewable Energy Call Center
 - renewable@energy.ca.gov
 - 800-555-7794 OR 916-654-5127



Questions

